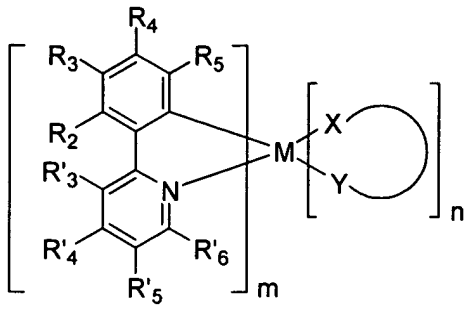
1. An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R; OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

is a monoanionic non carbon coordinatingcoordinatingcoordinated ligand.

2. The composition of claim 1 wherein R_4 is H.

3. The composition of claim 1 wherein at least one of R_3 and R_5 is an electron withdrawing group.

4. The composition of claim 1 wherein R_3 and R_5 are both electron withdrawing groups.

5. The composition of claim 1 wherein R_3 is an electron withdrawing group.

6. The composition of claim 1 wherein at least one of R_2 and R_4 is an electron withdrawing group.

7. The composition of claim 4 wherein at least one of R_2 and R_4 is an electron withdrawing group.

8. The composition of claim 1 wherein the electron withdrawing groups are selected from halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C-CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

9. The composition of claim 1 wherein at least one of R_3 and R_5 is an electron donating group.

10. The composition of claim 1 wherein R_3 and R_5 are both electron donating groups.

11. The composition of claim 1 wherein R_3 is an electron donating group.

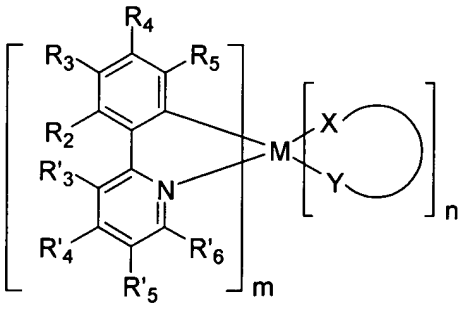
12. The composition of claim 1 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

13. The composition of claim 1 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

14. The composition of claim 1 wherein the metal is iridium.

15. The composition of claim 1 wherein the metal is platinum.

16. A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17,

between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3;

is a non carbon coordinated monoanionic non carbon coordinating ligand; and,

wherein R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

17. The composition of claim 16, wherein neither R_3 nor R_5 is an electron donating group and wherein R'_4 is an electron donating group.

18. The composition of claim 16, wherein neither R_3 nor R_5 is an electron withdrawing group and wherein R'_4 is an electron withdrawing group.

19. The composition of claim 16, wherein at least one of R_3 and R_5 is an electron withdrawing group and R'_4 is an electron donating group.

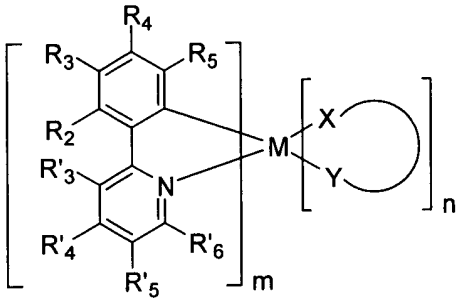
20. The composition of claim 16, wherein at least one of R_3 and R_5 is an electron donating group and R'_4 is an electron withdrawing group.

21. The composition of claim 16 wherein the electron withdrawing groups are selected from halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, or C≡CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

22. The composition of claim 16 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

23. The composition of claim 16 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

24. A composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R; OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at least one of R_3 and R_5 being selected from the group consisting of CN, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group, wherein m is an integer between 1 and 4 and n is an integer between 1 and 3 and X-Y is non carbon coordinating monoanionic ligand .

25. The composition of claim 24 wherein at least one of R_3 and R_5 is CN.

26. The composition of claim 25 wherein at least one of R_2 and R_4 is F.

27. The composition of claim 26 wherein R'_4 is an electron donating group.

28. The composition of claim 26 wherein R'_4 is NMe_2.

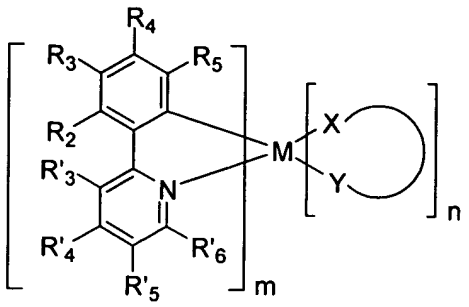
29. The composition of claim 24 wherein at least one of R_3 and R_5 is CF_3

30. The composition of claim 29 wherein at least one of R_2 and R_4 is F.

31. The composition of claim 29 wherein R'_4 is an electron donating group.

32. The composition of claim 29 wherein R'_4 is NMe_2.

33. A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at least one of R_3 and R_5 is either an electron withdrawing group or an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

 is a monoanionic non carbon coordinating ligand.

34. The light emitting device of claim 33 wherein at least one of R_3 and R_5 is an electron withdrawing group.

35. The light emitting device of claim 33 wherein R_3 and R_5 are both electron withdrawing groups.

36. The light emitting device of claim 33 wherein R_3 is an electron withdrawing group.

37. The light emitting device of claim 33 wherein R_2 and R_4 are electron withdrawing groups.

38. The light emitting device of claim 33 wherein R_2 and R_4 are electron withdrawing groups.

39. The light emitting device of claim 33 wherein at least one of R_3 and R_5 is an electron donating group.

40. The light emitting device of claim 33 wherein R_3 and R_5 are both electron donating groups.

41. The light emitting device of claim 33 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

42. The light emitting device of claim 33 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

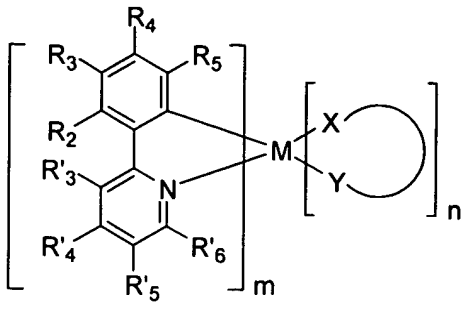
43. The light emitting device of claim 33 wherein the metal is Pt.

44. The light emitting device of claim 33 wherein the metal is Ir.

45. The light emitting device of claim 33 wherein light emitted by the organic layer has a maximum wavelength of less than 520 nm

46. The light emitting device of claim 33 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

47. A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

at least one of R_3 and R_5 is either an electron withdrawing group or an electron donating group;

m is an integer between 1 and 4 and n is an integer between 1 and 3;

 is a monoanionic non carbon coordinated ligand; and,

wherein R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

48. The light emitting device of claim 47, wherein at least one of R_3 and R_5 is an electron withdrawing group and R'_4 is an electron donating group.

49. The light emitting device of claim 47, wherein R_3 and R_5 are electron withdrawing groups and R'_4 is an electron donating group.

50. The light emitting device of claim 47, wherein at least one of R_3 and R_5 is an electron donating group and R'_4 is an electron withdrawing group.

51. The light emitting device of claim 47, wherein R_3 and R_5 are electron donating groups and R'_4 is an electron withdrawing group.

52. The light emitting device of claim 47 wherein the electron withdrawing groups are selected from halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, or C≡CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

53. The light emitting device of claim 47 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

54. The light emitting device of claim 47 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

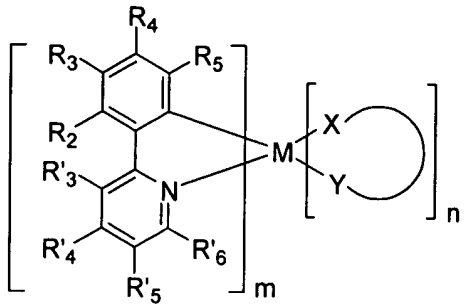
55. The light emitting device of claim 47 wherein the metal is Pt.

56. The light emitting device of claim 47 wherein the metal is Ir.

57. The light emitting device of claim 47, wherein light emitted by the organic layer has a maximum wavelength of less than 520nm.

58. The light emitting device of claim 47 wherein light emitted by the organic layer has a wavelength of between approximately 420 nm and approximately 480 nm.

59. A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

is a monoanionic non carbon coordinating ligand.

at least one of R_3 and R_5 is selected from the group consisting of CN, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

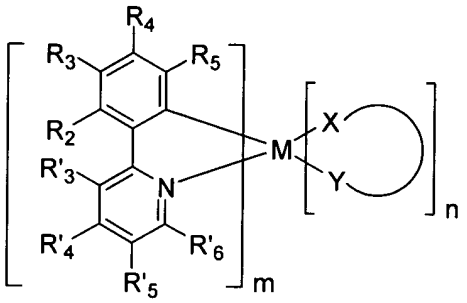
60. The light emitting device of claim 59 wherein at least one of R_3 and R_5 is CN.

61. The light emitting device of claim 60 wherein at least one of R_3 and R_5 is CN, and at least one of R_2 and R_4 is F.

62. The light emitting device of claim 60 wherein at least one of R_3 and R_5 is CF_3.

63. The light emitting device of claim 60 wherein at least one of R_3 and R_5 is CF_3, and at least one of R_2 and R_4 is F.

64. A composition represented by the following structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;

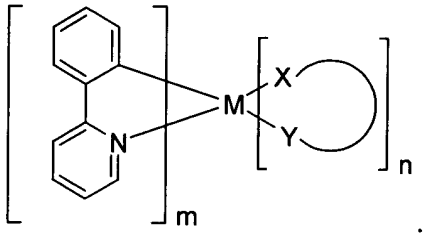
R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_2 through R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R; OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group;

m is an integer between 1 and 4 and n is an integer between 1 and 3; and,

is a monoanionic non carbon coordinating ligand,

wherein R_3 and R_5 are selected to provide a hypsochromic shift in the emission spectrum of the compound of greater than or equal to approximately 40 nm as compared with the emission spectrum of a composition with the following structure:

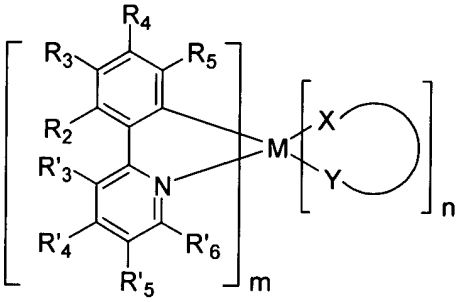


65. The emissive material of claim 1 wherein R_3 has a Hammett value greater than 0.3

66. The emissive material of claim 1 wherein R_3 has a Hammett value greater than 0.5

67. The emissive material of claim 1 wherein R_3 has a Hammett value greater than 0.6

68. An emissive material represented by the structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40;
m is at least 1 n is at least 0

X –Y is an ancillary ligand;

R_2 and R_4 are both F;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_3, R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R; OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group

69. The emissive material of claim 68 wherein at least one of R_3 and R_5 is an electron withdrawing group.

70. The emissive material of claim 68 wherein R_3 and R_5 are both electron withdrawing groups.

71. The emissive material of claim 68 wherein R_3 is an electron withdrawing group.

72. The emissive material of claim 68 wherein the electron withdrawing groups are selected from halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C-CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

73. The emissive material of claim 68 wherein at least one of R_3 and R_5 is an electron donating group.

74. The emissive material of claim 68 wherein R_3 and R_5 are both electron donating groups.

75. The emissive material of claim 68 wherein R_3 is an electron donating group.

76. The emissive material of claim 68 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

77. The emissive material of claim 68 wherein the metal is selected from Ir, Pt, Pd, Rh,

Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

78. The emissive material of claim 68 wherein the metal is iridium.

79. The emissive material of claim 68 wherein the metal is platinum.

80. The compostion of claim 68 wherein R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group then R'_4 is an electron withdrawing group and if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.

81. The emissive material of claim 80 wherein neither R_3 nor R_5 is an electron donating group and wherein R'_4 is an electron donating group.

82. The emissive material of claim 80 wherein neither R_3 nor R_5 is an electron withdrawing group and wherein R'_4 is an electron withdrawing group.

83. The emissive material of claim 80 wherein at least one of R_3 and R_5 is an electron withdrawing group and R'_4 is an electron donating group.

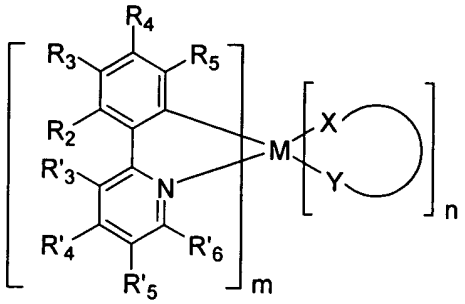
84. The emissive material of claim 80 wherein at least one of R_3 and R_5 is an electron donating group and R'_4 is an electron withdrawing group.

85. The emissive material of claim 80 wherein the electron withdrawing groups are selected from halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, or C≡CR, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R, where R is a hydrogen, alkyl, aryl or heteroaryl group.

86. The emissive material of claim 80 wherein the electron donating groups are selected from alkyl, alkenyl, aryl, heteroaryl, OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is a hydrogen, alkyl, aryl or heteroaryl group.

87. The emissive material of claim 80 wherein the metal is selected from Ir, Pt, Pd, Rh, Re, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

88. A light emitting device comprising an organic layer, the organic layer comprising a composition represented by the general structure:



wherein M is a heavy metal with an atomic weight of greater than or equal to 40; m is at least 1 n is at least 0

X –Y is an ancillary ligand;

R_2 and R_4 are both F;

R_3 is a substituent having a Hammett value less than about -0.17, between about -0.15 and 0.05, or greater than about 0.07;

each of R_3, R_5 and R'_3 through R'_6 are independently selected from the group consisting of H, halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, PO_3R, C≡CR, alkyl, alkenyl, aryl, heteroaryl, aryl or heteroaryl groups substituted with halogens, CN, CF_3, C_nF_{2n+1}, trifluorovinyl, NO_2, CO_2R, C(O)R, S(O)R, SO_2R, SO_3R, P(O)R, PO_2R, or PO_3R; OR, SR, NR_2 (including cyclic-amino), PR_2 (including cyclic-phosphino), where R is hydrogen, an alkyl group, an aryl group or a heteroaryl group

89. The light emitting device of claim 88 wherein at least one of R_3 and R_5 is an electron withdrawing group.

90. The light emitting device of claim 88 wherein R'_4 is an electron withdrawing group or an electron donating group such that if neither R_3 nor R_5 is an electron withdrawing group

then R'_4 is an electron withdrawing group and if neither R_3 nor R_5 is an electron donating group then R'_4 is an electron donating group.